Claims

1. Use of a mixture containing

A) at least two different acrylic acid C_1-C_6 alkyl esters;

B) at least one compound from the group comprising C_1-C_8 mercaptans, C_4-C_{12} thiophenes, C_2-C_8 sulfides or C_2-C_8 disulfides;

C) at least one compound from the group comprising norbornenes, C_1-C_6 carboxylic acids, C_1-C_8 aldehydes, C_6-C_{14} phenols, C_7-C_{14} anisoles or C_4-C_{14} pyrazines;

D) optionally an antioxidant

for the odorisation of fuel gas having a methane content of at least 60 wt.%.

2. Use according to claim 1, wherein the mixture contains

A) at least two different acrylic acid C_1-C_4 alkyl esters;

B) at least one compound from the group comprising C_1-C_8 mercaptans, C_4-C_8 thiophenes, C_2-C_8 sulfides or C_2-C_8 disulfides;

C) at least one compound from the group comprising norbornenes, C_2-C_5 carboxylic acids, C_2-C_5 aldehydes, C_6-C_{10} phenols, C_7-C_{10} anisoles or C_4-C_{10} pyrazines and

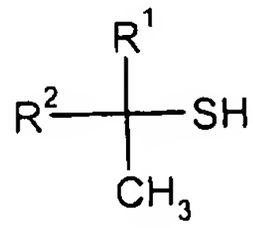
D) at least one antioxidant.

3. Use according to claim 1, wherein the mixture contains

A) acrylic acid methyl ester and acrylic acid ethyl ester;

B) at least one compound from the group comprising thiophene, tetrahydrothiophene, dimethyl sulfide, diethyl sulfide, di-n-propyl sulfide,

diisopropyl sulfide, dimethyl disulfide, diethyl disulfide, di-n-propyl disulfide, diisopropyl disulfide or the mercaptans having the formula (I)



(I)

wherein

R^1 denotes hydrogen, methyl or ethyl, preferably methyl, and

R^2 denotes an alkyl group having 1 to 4 carbon atoms, preferably methyl, ethyl, isopropyl, isobutyl or tert-butyl;

C) at least one compound from the group comprising C_2-C_5 carboxylic acids, C_3-C_5 aldehydes, C_1-C_4 monoalkylated phenols and

D) at least one antioxidant.

4. Use according to claim 1, wherein the mixture comprises

A) acrylic acid methyl ester and acrylic acid ethyl ester;

B) tert-butyl mercaptan;

C) at least one compound from the group comprising propionaldehyde, isovaleraldehyde, isovaleric acid, 2-ethylphenol, 4-ethylphenol and

D) one or two antioxidants

or consists of these components.

5. Use according to one of claims 1 to 4, characterised in that the mixture contains as antioxidant tert-butyl hydroxytoluene or hydroquinone monomethyl ether.

6. Use according to one of claims 1 to 5, characterised in that the mixture contains:

60 to 97 wt.% of component A) and/or

1 to 30 wt.% of component B) and/or

0.5 to 20 wt.% of component C) and/or

0.01 to 2 wt.% of component D).

7. Use according to one of claims 1 to 5, characterised in that the mixture contains:

70 to 95 wt.% of components A) and/or

2 to 25 wt.% of components B) and/or

1 to 10 wt.% of components C) and/or

0.02 to 1 wt.% of components D).

8. Use according to at least one of claims 1 to 7, characterised in that the ratio by weight of component B) to component C) is in the range from 6 : 1 to 1 : 3.

9. Fuel gas with a methane content of at least 60 wt.%, containing a mixture as defined in one of claims 1 to 8.

10. Fuel gas according to claim 9, characterised in that the fuel gas is natural gas.

11. Process for the odorisation of fuel gas having a methane content of at least 60 wt.%, characterised in that a mixture as defined in one of claims 1 to 8 is added to the fuel gas.

12. Process according to claim 11, characterised in that the mixture is added to the fuel gas in a quantity of 5 to 100 mg per m^3 of gas.